

PRELIMINARY AMENDMENT  
U.S. Appln. No. 09/778,558

REMARKS

Entry and consideration of this Amendment are respectfully requested.

Applicants have amended claims 1 and 9 consistent with the description at page 6, lines 4-14 and page 11, line 29 through page 12, line 2. The amendments to claims 1 and 9 are non-narrowing amendments that serve to clarify the internal structure of extruded film layer (a) and coating layer (b). In particular, both the extruded film layer (a) and the coating layer (b) have an open-cell structure with interconnecting voids to allow ink fluids to penetrate into the film and contribute to the dry-time (Applicants refer to the description at page 11, line 29 through page 12, line 2).

If extruded film layer (a) does not have an open-cell structure, it cannot assist in absorbing the ink jet ink fluids applied during ink jet printing, and the printed dry times will be poor.

As evidenced by Control 3 in the Table at page 18 of the specification, if an open-cell porous HDPE film is printed on without an ink-receiving layer, the dry times are good but the image density is poor because the inks penetrate too deeply into the porous film.

If a non-porous ink-receiving layer is coated on an open-cell porous HDPE film, the image densities are good, but the dry times are poor (Applicants refer to Controls 1 and 2 in the Table at page 18).

It is only possible to achieve the superior combination of good dry times and good image densities needed for photo-type images when a coating layer (b) that has an open-cell structure with interconnecting voids is coated on an extruded film layer (a) that has an open-cell structure with interconnecting voids (Applicants refer to Elements 1 and 2 in the Table at page 18).

Applicants maintain their position that Newberry discloses only non-porous image-receiving layers. As shown in the Table at page 18 of the specification, when non-porous ink-receiving layers are used, dry times are poor (Applicants refer to Controls 1 and 2 in the Table, using polyvinylalcohol and gelatin, respectively).

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More importantly, the voided imaging element disclosed by Newberry does not have open-cell pores, *i.e.*, it does not permit ink permeability. Specifically, at column 4, lines 34-37, Newberry discloses that the "voids generally tend to be closed cells and, thus, there is virtually no path open from one side of the voided core to the other side through which gas or liquid can traverse." In addition, the non-voided skin layers on either side of the voided core matrix (column 5, line 66 through column 6, line 4) would prevent ink fluid penetration into the polyolefin film sheet. The end result, of course, is in direct contrast to a result of the present film structure, which allows ink fluids to penetrate into the film and contribute to the dry-time (Applicants refer to the description at page 11, line 29 through page 12, line 2).

Still further, the combined disclosures of Newberry and Schleinz fail to lead to a conclusion of obviousness.

In this regard, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious (*In re Ratti*, 123 USPQ 349 (CCPA 1959)).

Applying the law to the facts of the present case, there are at least two reasons why a person of ordinary skill in the art would not modify Newberry in light of Schleinz.

A first reason that a person of ordinary skill in the art would not modify Newberry in light of Schleinz is due to the fact that Schleinz's nonwoven fibrous web is direct printed and functions without an underlying layer or overlaying outer layer (column 7, lines 3-25). Therefore, a person of ordinary skill in the art working with Newberry's disclosure that includes top sheets, bottom sheets, imaging layers, etc. would not look to Schleinz for guidance about a modification.

A second reason that a person of ordinary skill in the art would not modify Newberry in light of Schleinz is due to the fact that, to the extent that Schleinz discloses an open-cell structure (Applicants submit that Schleinz does not expressly disclose an open-cell structure), modifying

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Newberry by reference to Schleinz would directly counter Newberry's structure of closed-cell voids, discussed at column 4, lines 34-37.

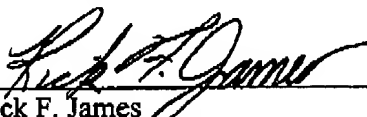
Finally, there are additional reasons that a person of ordinary skill in the art would not modify Newberry based on Schleinz.

Schleinz discloses a polyolefin fibrous web that can be printed with ink. Schleinz is concerned with creating personal care products, such as diapers and training pants, with printed designs to improve their appearance. The imaging requirements for Schleinz's application are much less severe than those for photographic-type applications, such as that in Newberry and the present invention.

For all of the foregoing reasons, Applicants respectfully request that the Examiner reconsider and withdraw the outstanding §103 rejection.

Respectfully submitted,

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (AMENDED) A film comprising an ink jet-printed microporous material comprising (a) an extruded film layer and (b) a coating layer coated on a surface of said extruded film layer (a), wherein said extruded film layer (a) is biaxially stretched and porous, wherein said extruded film layer (a) comprises high density polyethylene (HDPE) and particles of an incompatible material, wherein said extruded film layer (a) has a meshed network of HDPE fibers and striations of layers coplanar with the plane of the film, wherein said porous extruded film layer (a) has an open-cell structure with interconnecting voids such that it is porous in a direction perpendicular to the plane of the film, wherein said extruded film layer (a) has a void content of at least about 20%, and wherein said coating layer (b) is a porous ink-receiving layer that has an open-cell structure with interconnecting voids.

9. (AMENDED) A method for producing an ink jet-printed microporous material, said method comprising applying ink jet printing ink from an ink jet printer upon at least one surface of a coated microporous material, wherein said coated microporous material comprises (a) an extruded film layer and (b) a coating layer coated on a surface of said extruded film layer (a), wherein said extruded film layer (a) is biaxially stretched and porous, wherein said extruded film layer (a) comprises high density polyethylene (HDPE) and particles of an incompatible material, wherein said extruded film layer (a) has a meshed network of HDPE fibers and striations of layers coplanar with the plane of the film, wherein said porous extruded film layer (a) has an open-cell structure with interconnecting voids such that it is porous in a direction perpendicular to the plane of the film, wherein said extruded film layer (a) has a void content of at least about 20%, and wherein said coating layer (b) is a porous ink-receiving layer that has an open-cell structure with interconnecting voids.